

**Mather+Platt**

A brand of the Wilo Group

TECHNICAL DATA SHEET FOR FLUSHING WATER SUPPLY

Sr.No.	Description		Details
1	MAKE	:	WILO MATHER & PLATT
2	DUTY CONDITION	:	15 m ³ / Hr @ 80 Mtr
3	CAPACITY (M ³ /Hr)/ (LPM)	:	15 m ³ / Hr / 250 LPM
4	TOTAL DYNAMIC HEAD	:	80 Mtr
5	MODEL NO.	:	WMP Boost 3HELIX FIRST V1608 PC MV
6	WORKING + STANDBY	:	2W+1S
7	STARTER	:	MULTI VFD
8	EFFICIENCY	:	67.7
9	SHUTT OF HEAD	:	105 Mtr
10	PUMP TYPE	:	VERTICAL INLINE MULTISTAGE
11	ABSORBED POWER	:	6.1 kW
12	MOTOR RATING	:	5.5 kW
13	SPEED (POLE)	:	2 POLE
14	INSULATION CLASS	:	F
15	IP / EFFICIENCY CLASS	:	IP55 IE3

MATERIAL OF CONSTRUCTION

1	PUMP HOUSING	:	EN-GJL-250 (cataphoretic-coated)
2	IMPELLER	:	1.4307 [AISI304L]
3	SHAFT	:	1.4301 [AISI304]
4	GLAND SEALING	:	MECHNCIAL SEAL

Technical data

High-pressure multistage centrifugal pump Helix FIRST V 1608-5/16/E/S/400

Project name

Untitled project 2020

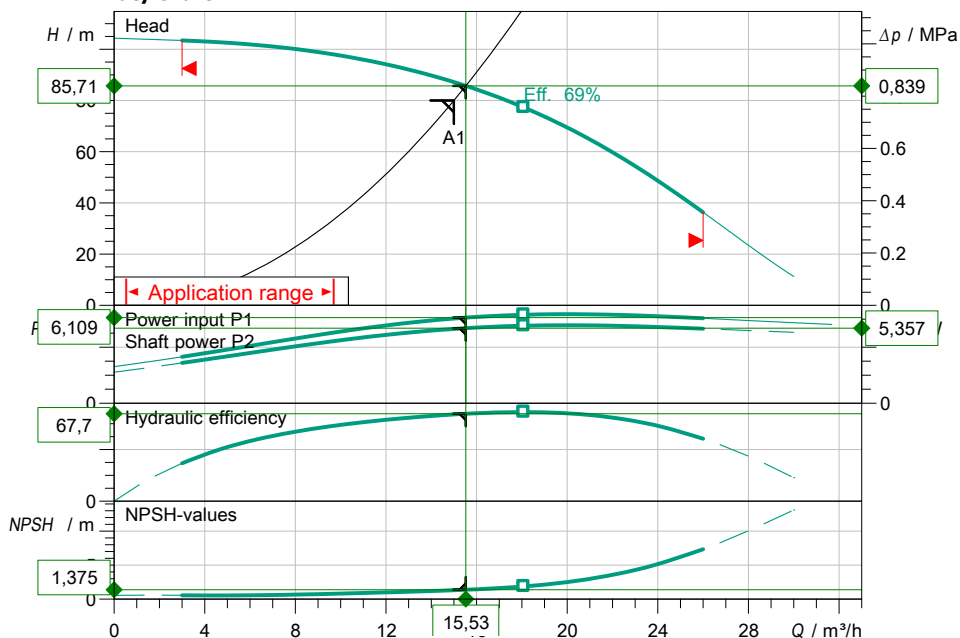
Project ID

Installation location

Customer pos.no

Date 2020-08-06

Duty chart

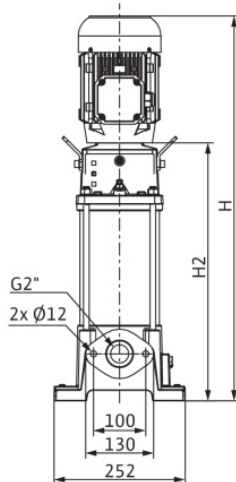
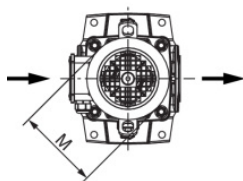
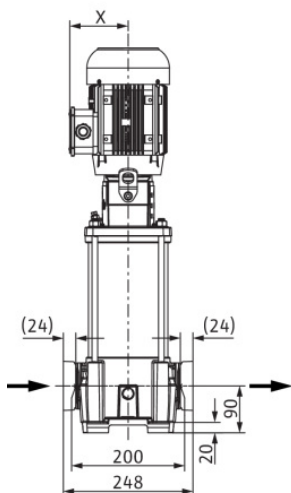
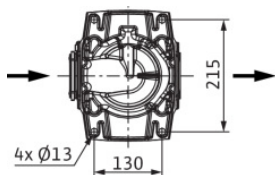


Pump curves in accordance with ISO 9906: 2012 3B

Dimensions

mm

H	1051
H2	715
ØM	210
X	164



Requested data

Flow	15.00 m³/h
Head	80.00 m
Media	Water 100 %
Fluid temperature	10.00 °C
Density	998.30 kg/m³
Kin. viscosity	1.00 mm²/s

Hydraulic data (Duty point)

Flow	15.53 m³/h
Head	85.71 m
Shaft power P2	5.36 kW
Hydraulic efficiency	67.70 %
NPSH	1.38 m

Product data

High-pressure multistage centrifugal pump Helix FIRST V 1608-5/16/E/S/400-50	
Max. operating pressure	1.6 MPa
Inlet pressure max.	10 bar
Fluid temperature	-20 °C ... +120 °C
Max. ambient temperature	50 °C
Minimum efficiency index (MEI)	≥ 0,5

Motordata per Motor/Pump

Motor efficiency level	IE3
Mains connection	3~ 400 V / 50 Hz
Permitted voltage tolerance	±10 %
Max. speed	2900 1/min
Rated power P2	5.50 kW
Rated current	10.50 A
Power factor	0.86
Efficiency	87.1/89/89.2%
50% / 75% / 100%	
Degree of protection	IP55
Insulation class	F
Motor protection	yes

Fitting dimensions

Pipe connection on the suction side	G 2, PN16
Pipe connection on the pressure side	G 2, PN16

Materials

Pump housing	EN-GJL-250
Impeller	1.4307
Shaft	1.4301
Shaft seal	Q1BE3GG
Gasket material	EPDM

Information for order placements

Weight approx.	58 kg
Item number	4200999

WMP PC - MV PANEL BOM (5.5KW)

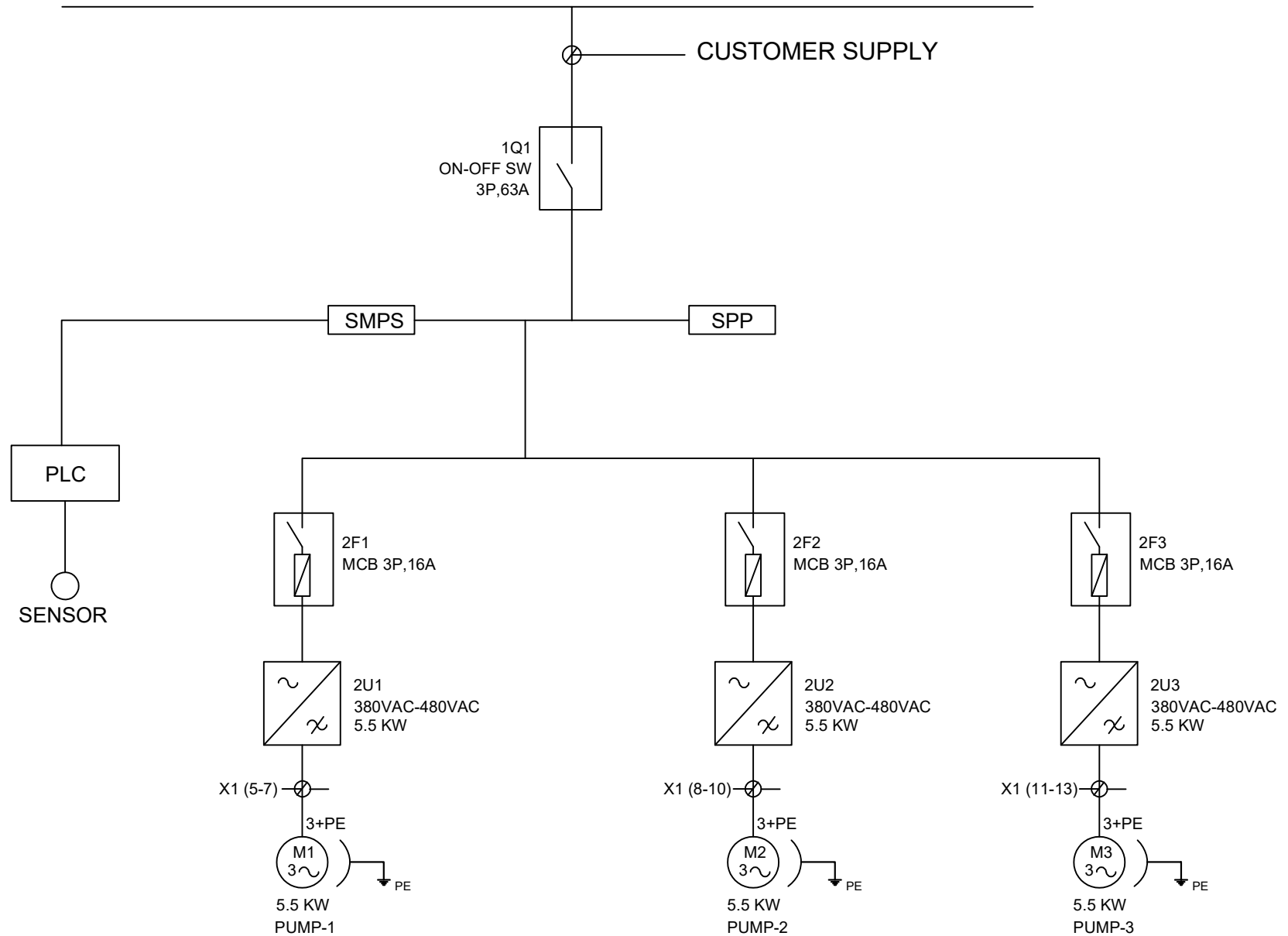
ITEM NO.	ITEM DESIGN	DESCRIPTION	TYPE NO.	TECHNICAL DATA	MAKE	QTY.
1.	<u>1Q1</u>	ON-OFF SWITCH WITH PADLOCK		63A,3P	SALZER / SOCOMEC	01
2.	<u>2F1 TO 2F3</u>	3 POLE MCB		16A,3P	SCHNEIDER/ABB/SIEMENS/C&S	03
3.	<u>1F2</u>	1 POLE MCB		6A,1P	SCHNEIDER/ABB/SIEMENS/C&S	01
4.	<u>1U1</u>	PROGRAMMABLE LOGIC CONTROLLER (HMI)		5.7" TOUCHSCREEN	SCHNEIDER	01
5.	<u>2U1,2U2,2U3</u>	VFD DRIVE I/P-380VAC TO 480VAC	MICRO-51	5.5KW	DANFOSS	03
6.	<u>SPP</u>	SINGLE PHASE PREVENTER			L&T/GIC/SELEC	01
7.	<u>X0</u>	CLIPON TERMINAL BLOCK		6.0 SQ.MM	ELEMEX	04
8.	<u>X1</u>	CLIPON TERMINAL BLOCK		4.0 SQ.MM	ELEMEX	09
9.	<u>X2,X3,X4,X5</u>	CLIPON TERMINAL BLOCK		2.5 SQ.MM	ELEMEX	14
10.	<u>SMPS</u>	I/P : 230VAC, O/P : 24VDC,2A			NHP/MEANWELL	01
11.		END PLATE		6.0 SQ.MM	ELEMEX	01
12.		END PLATE		4.0 SQ.MM	ELEMEX	03
13.		END PLATE		2.5 SQ.MM	ELEMEX	04
14.		END CLAMP			ELEMEX	08
15.		PANEL - 600H X 600W X 250D			RITTAL / ELDON	01
16.		POWER CABLE - 2.5 Sq.mm (PANEL TO MOTOR)			REPUTED	AS REQ.
17.		CONTROL CABLE - 0.5 Sq.mm & 1.0 Sq.mm			POLYCAB	10/20 MTR.
18.		POWER CABLE - 6.0 Sq.mm (DISTRIBUTION)			POLYCAB	5 MTR.
19.		INDIVIDUAL FEEDER - 2.5 Sq.mm			POLYCAB	6 MTR.
20.	<u>RMR02</u>	RELAY MODULE		2WAY,2C/O	WMPPL	01
21.	<u>1E1 , 1E2</u>	230VAC FAN			REXNORD / JAINSON	02
22.		FILTER FOR PROTECTION			ELETTRO / JAINSON	04
23.		CABLE GUIDE (45MM X 25MM)			TRINITY TOUCH	2 MTR.
24.	<u>TH</u>	THERMOSTAT		0 - 60°c	FINDER/C&S	01

REV	REVISION	DATE	INITIAL	CHD



DRAWN BY	SCS	16-10-2019	WILO Mather And Platt Pumps Pvt. Ltd. Chinchwad, Pune - 19.		
CHECKED BY	KBS	16-10-2019	MODEL: Switch Box 3 X 5.5 KW WMP-MV	CLIENT : REPUTED	
APPROVED BY	GLS	16-10-2019	DRAWING NAME:- BILL OF MATERIAL	DRAWING NO : 7338 FE/E	Page No 2

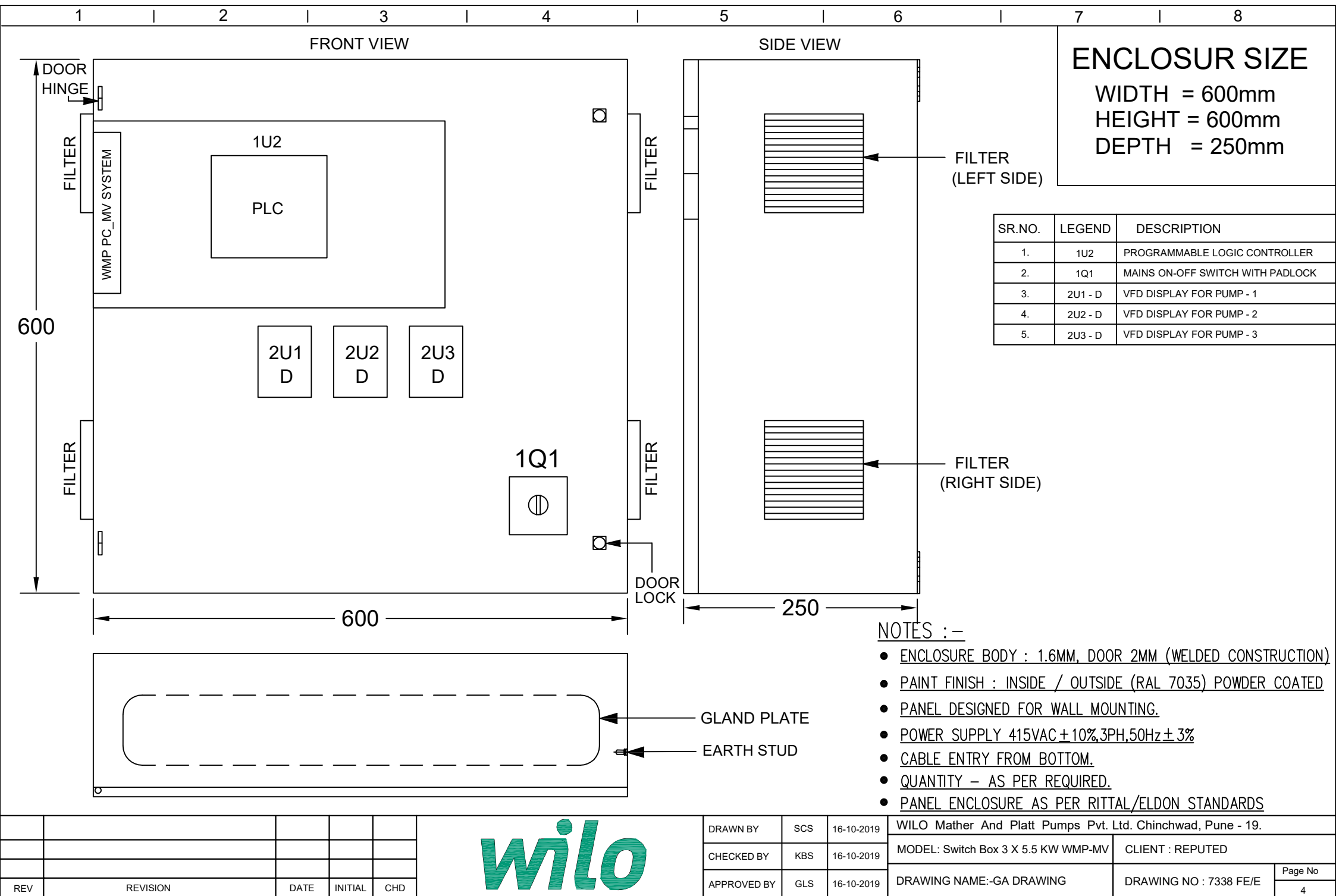
415V 50HZ, 3 PHASE ,4 WIRE AC MAIN



REV	REVISION	DATE	INITIAL	CHD

wilo

DRAWN BY	SCS	16-10-2019	WILO Mather And Platt Pumps Pvt. Ltd. Chinchwad, Pune - 19.	
CHECKED BY	KBS	16-10-2019	MODEL: Switch Box 3 X 5.5 KW WMP-MV	CLIENT : REPUTED
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				Page No 3



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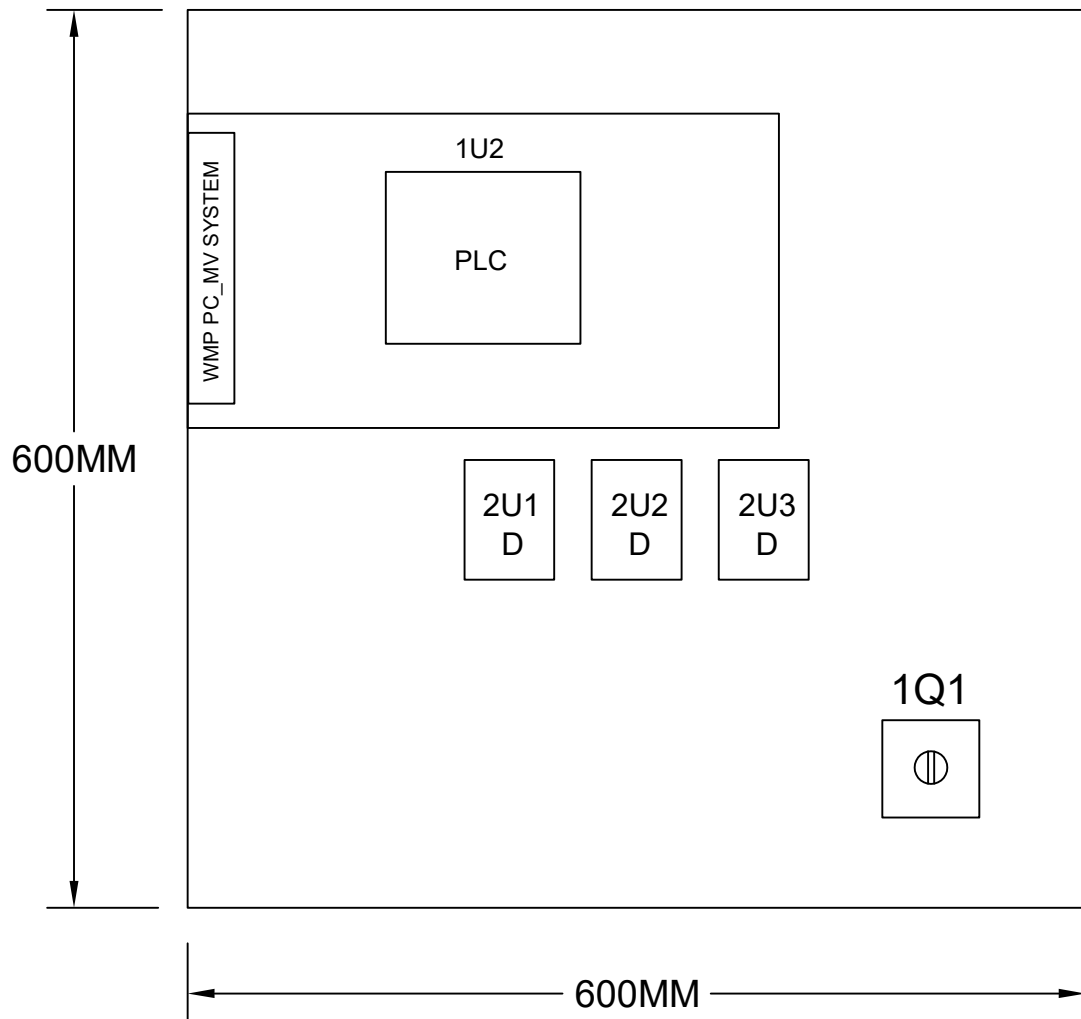
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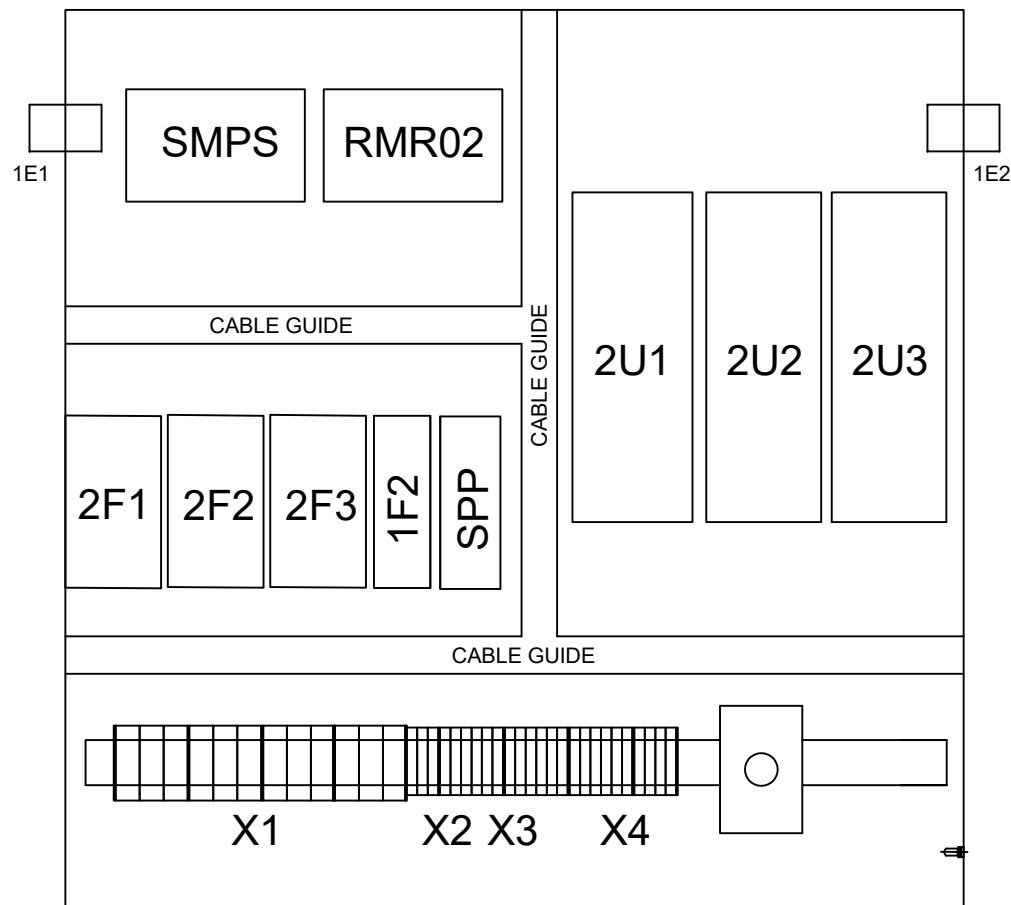
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FRONT VIEW



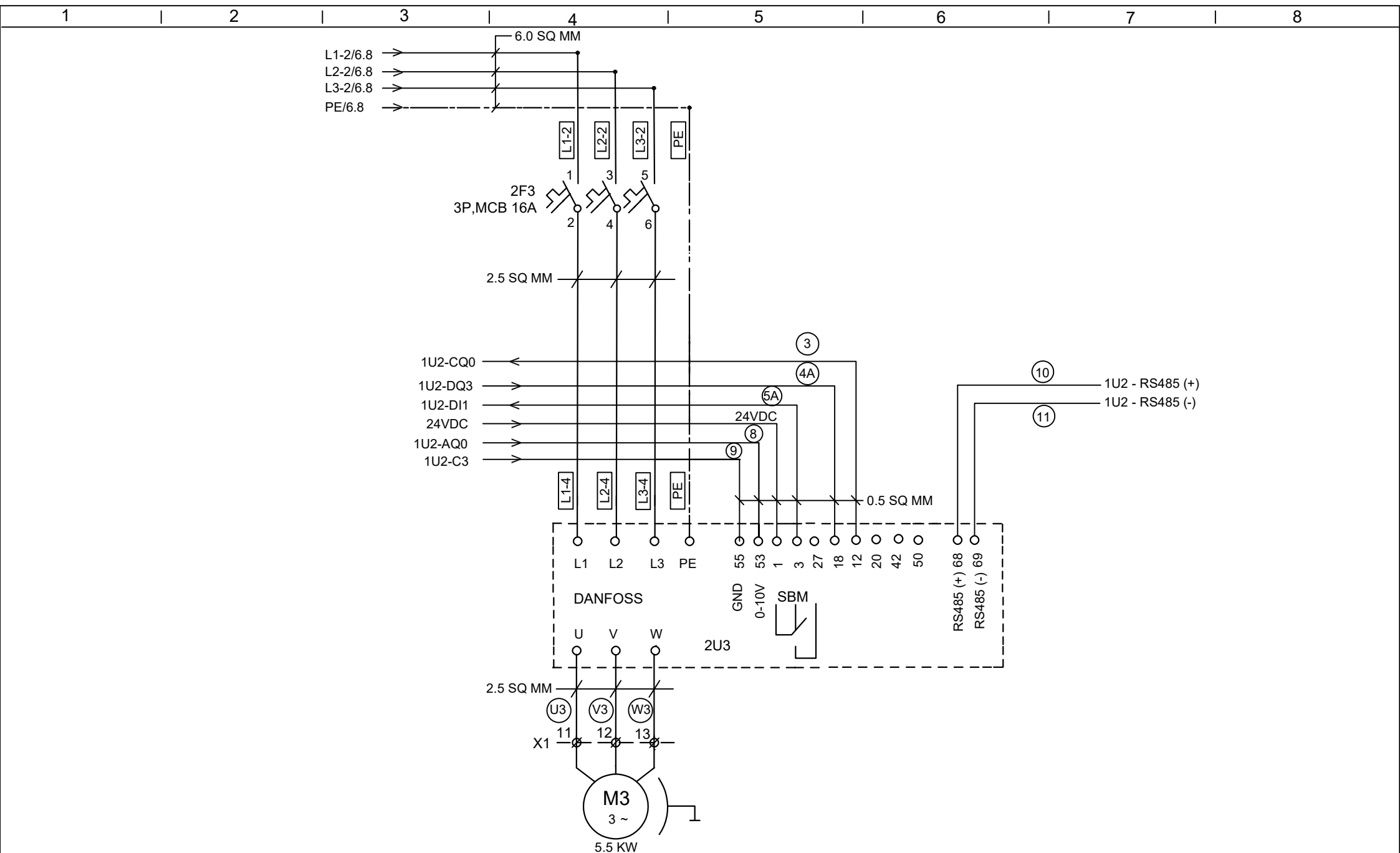
INTERNAL LAYOUT




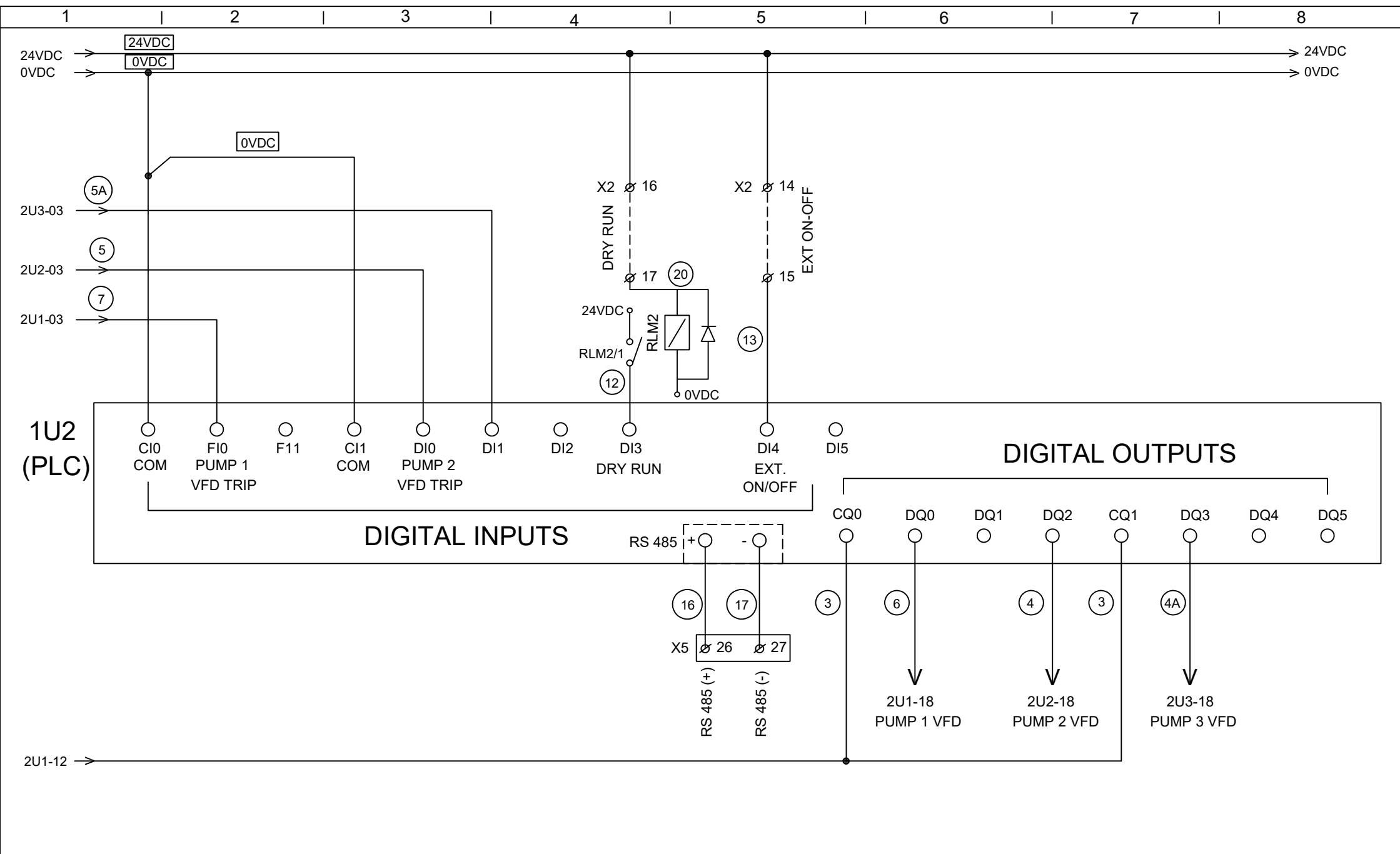
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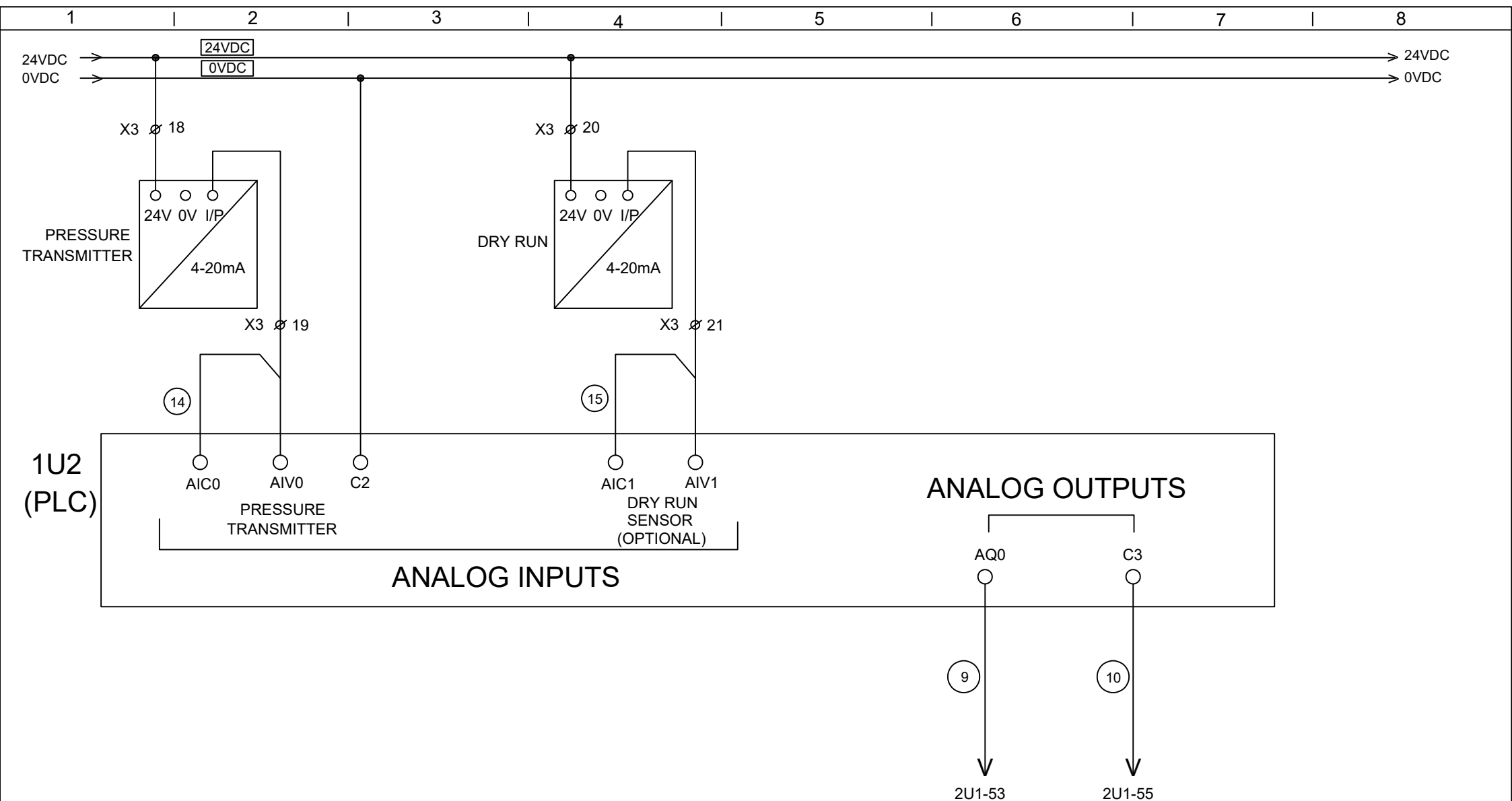
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REV	REVISION	DATE	INITIAL	CHD						Page No	8



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						APPROVED BY	GLS	16-10-2019	DRAWING NAME:- DIGITAL I/P & O/P		DRAWING NO : 7338 FE/E
REV	REVISION		DATE	INITIAL		CHD					Page No 9

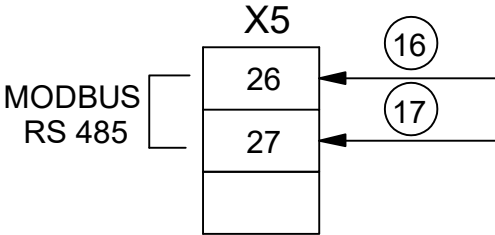
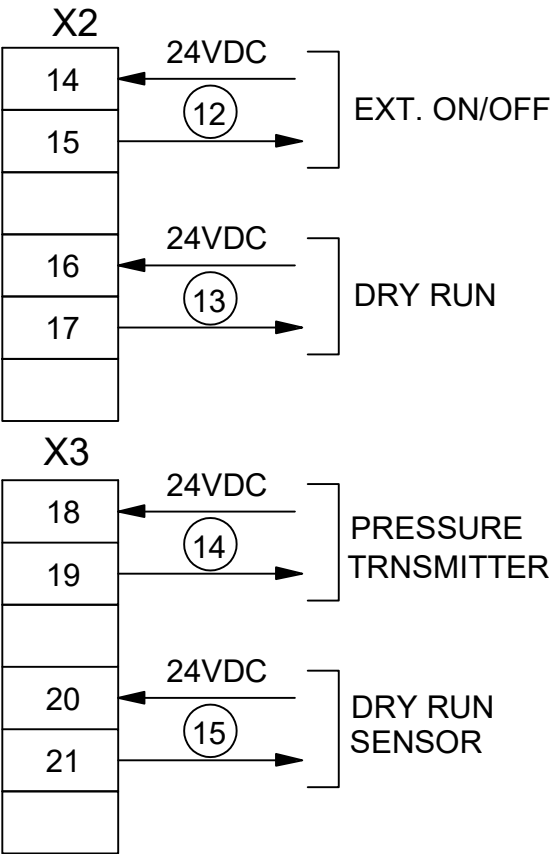
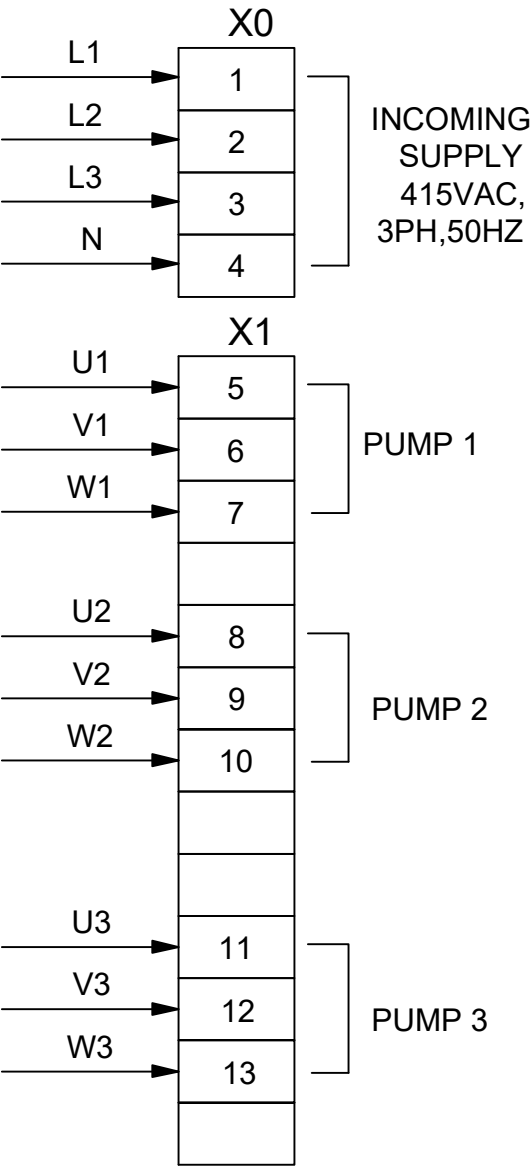


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APPROVED BY	GLS	16-10-2019	DRAWING NAME:- ANALOG I/P & O/P	DRAWING NO : 7338 FE/E	Page No 10

TERMINAL DETAILS



Challenger™ SERIES



FEATURES

- Patented CAD-2 diaphragm technology
- NSF Standard 61, CE/PED, WRAS, ACS, ISO-9001, Gost, Evrazes approved
- Stainless steel water connection
- Condensation reducing design
- Two part polyurethane, epoxy primed paint finish
- Leak free air valve cap sealed with closed cell foam
- Comprehensive testing
- No maintenance

Challenger™ tanks are ideally suited for a wide range of applications, including booster systems, thermal expansion, heating expansion, irrigation systems, and hydraulic hammer arresting.

Water Chamber, Patented Controlled Action Design:
Efficient and cost effective, Challenger™ tanks are designed with a patented controlled action CAD-2 diaphragm assembly. It features a chlorine resistant 100% butyl diaphragm with a precision molded copolymer polypropylene liner for superior air and water separation. The CAD-2 diaphragm assembly is clenched together with a positive lock internal clench ring which contains drawdown water in a pre-charged air atmosphere, thus providing separation between the diaphragm and tank wall. This “air buffer” design means few problems with condensation. Constructed with an FDA approved high grade butyl, the diaphragm assembly seals water in a true non-corrosive chamber.

On the exterior, the almond colored two part polyurethane paint finish over an epoxy undercoating provides hundreds of hours of UV and salt spray protection.

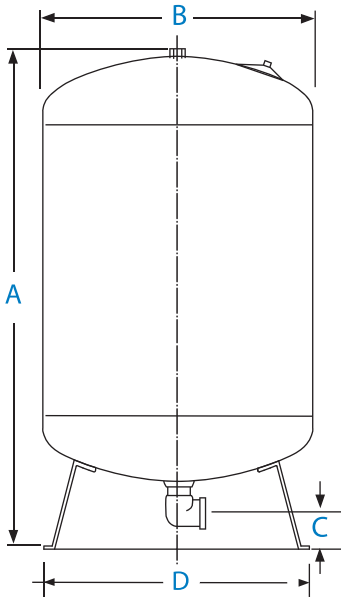
The air chamber is sealed with a fixed o-ring and closed cell foam and will provide many years of leak free and service free life. Challenger™ tanks are quality tested at several stages on the production line to insure the structural integrity of every tank. Challenger™ tanks are the best steel pressure vessels in the market today and represent the best value for the investment.

SPECIFICATIONS Challenger™ Series Models

BSP	NPT	Nominal Volume		Shipping (box) Volume		Shipping (box) Weight		Dimensions							
								A		B		C		D	
		liter	gal	m³	ft³	kg	lbs	cm	inches	cm	inches	cm	inches	cm	inches
GCB-60LV	GCN-15GV	60	15	0.10	3.65	12.25	27.0	57.27	22.55	40.68	16.02	4.80	1.89	36.93	14.54
GCB-80LV	GCN-20GV	80	20	0.13	4.74	15.20	33.5	75.27	29.60	40.68	16.02	4.80	1.89	36.93	14.54
GCB-100LV	GCN-25GV	100	25	0.16	5.68	18.10	40.0	89.68	35.31	40.68	16.02	4.80	1.89	36.93	14.54
GCB-130LV	GCN-35GV	130	35	0.20	7.08	22.50	49.5	110.94	43.68	40.75	16.02	4.80	1.89	36.93	14.54
GCB-200LV	GCN-50GV	200	50	0.31	10.88	34.25	75.5	105.56	41.56	53.29	21.03	5.68	2.23	44.63	17.57
GCB-250LV	GCN-60GV	250	60	0.37	13.18	39.24	86.5	122.75	48.33	53.37	21.03	5.68	2.23	44.63	17.57
GCB-300LV	GCN-80GV	300	80	0.46	16.25	47.17	104.0	151.27	59.56	53.37	21.03	5.38	2.23	44.63	17.57
GCB-325LV	GCN-85GV	325	85	0.46	16.25	48.40	106.7	116.68	45.94	66.21	26.07	6.43	2.53	54.23	21.35
GCB-450LV	GCN-120GV	450	120	0.74	26.14	69.85	154.0	155.07	61.05	66.06	26.01	6.43	2.53	54.23	21.35

System Connection:
Models GCB-60LV - GCB-130LV: 1" BSP stainless steel elbow
Models GCB-200LV - GCB-500LV: 1 1/4" BSP stainless steel elbow
Models GCN-15GV - GCN-35GV: 1" NPT stainless steel elbow
Models GCN-50GV - GCN-133GV: 1 1/4" NPT stainless steel elbow

Note: Minor dimensional variation may occur
Please refer to tank packaging for correct factory set pre-charge information.
Maximum working temperature 90°C / 194°F
Maximum working pressure: GCB- 10 bar / 150 psi ; GCN- 8.6bar / 125psi



- ① Leak-Free, O-ring sealed air valve cap
- ② Carbon steel tank shell with two-part polyurethane / epoxy primed paint finish
- ③ Patented CAD-2 diaphragm design
- ④ Stainless steel water connection
- ⑤ Condensation reducing design
- ⑥ Virgin Polypropylene Liner

